

APR

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(s): Janne Parantainen

SERIAL NO.: 09/595,275

ART UNIT: 2634

FILING DATE: June 15, 2000

EXAMINER: Chieh M. Fan

TITLE: METHOD AND ARRANGEMENT FOR CHOOSING A CHANNEL  
CODING AND INTERLEAVING SCHEME FOR CERTAIN  
TYPES OF PACKET DATA CONNECTIONS

ATTORNEY

DOCKET NO.: 297-009504-US (PAR)

Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

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RESUBMITTAL OF APPEAL BRIEF

I. INTRODUCTION

This is in response to the telephone conversation with Examiner Fan on February 23, 2005, wherein Applicant's attorney was advised that this application is about to become abandoned for failure to timely file a Brief on Appeal in regard to the above-identified patent application. Reconsideration of the abandonment of the application is respectfully solicited in view of the following remarks.

## II. REMARKS

A review of Applicant's file has shown that an Appeal Brief was duly filed on July 27, 2004, prior to the due date of July 28, 2004 based on a Notice of Appeal, filed May 28, 2004. This is shown by the certificate of mailing filed with the Brief and by a copy of the return postcard, stamped by the USPTO, which accompanied the Brief. A Copy of the original documents filed are resubmitted herewith.

These documents are being submitted in response to the above cited telephone conversation. Applicant requests, in view of the circumstances, that this file be reinstated and allowed to proceed to Appeal. In the event that such reinstatement is not procedurally possible, then Applicant requests that this request be treated as a Petition to Withdraw Abandonment.

Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,



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Janik Marcovici  
Reg. No. 42,841

2/24/05  
Date

Perman & Green, LLP  
425 Post Road  
Fairfield, CT 06824  
(203) 259-1800  
Customer No.: 2512

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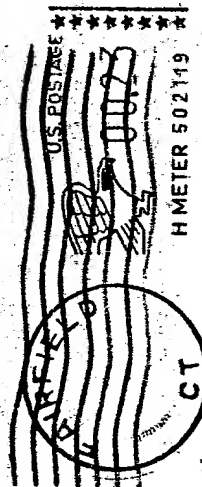
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- ☒ Issue Fee  
Appeal Brief (in triplicate) ( ) 12 page(s)

- ☐ Assignment  
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- ☐ Notice of Appeal  
Petition & Fee for Extension of Time  
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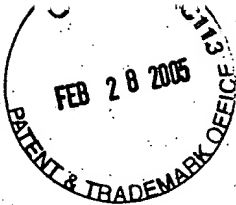
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APPELLANTS' BRIEF  
(37 C.F.R. §1.192)

This is an appeal from the final rejection of the claims in the above-identified application. A Notice of Appeal was mailed on May 28, 2004. The fees required under 37 C.F.R. §1.17 are being submitted herewith. This brief is being submitted in triplicate. The appendix of claims are attached hereto.

**I. REAL PARTY IN INTEREST**

The real party in interest in the subject application is the assignee, Nokia Corporation, Espoo, Finland.

**II. RELATED APPEAL AND INTERFERENCES**

There are no related appeals or interferences.

### III. STATUS OF THE CLAIMS

Claims 2 and 3 are allowed. Claims 1 and 4-6 stand rejected under 35USC103(a) on the basis of "admitted prior art" in view of the cited reference Kronestedt, U.S. Patent No. 6,308,082.

### IV. STATUS OF AMENDMENTS FILED SUBSEQUENT TO FINAL REJECTION

An amendment was filed after final rejection to overcome certain objections of the Examiner. Amendments were made to the Specification and the Abstract and Claim 2 was rewritten in independent form. This amendment was entered resulting in the allowance of claims 2 and 3 and the withdrawal of the objections to the Specification and Abstract.

### V. SUMMARY OF THE INVENTION

A central idea in the present invention is that channel coding and/or interleaving schemes should be chosen independently, for each new connection, as the connection is set up. As shown in figure 1, the request for setting up of a connection is generated by the mobile terminal 101 and includes certain QoS parameters, selected by the mobile terminal, that the new connection should fulfil. The decision-making device 103 will take the requested QoS parameters and use them as a basis for selecting the appropriate, connection-specific channel coding and/or interleaving schemes. In the present invention, the channel coding and/or interleaving schemes is chosen independently for each new connection as it is set up. The selection of QoS parameters by the terminal 101 is based on the expected use of the connection and the decision-making device 103 will apply the requested QoS parameters as a basis for selecting the appropriate, channel coding and/or interleaving

schemes for the specific connection. The channel coding and/or interleaving schemes are not applied to the network generically, but only to the individual connection being set up.

#### **VI. ISSUES PRESENTED FOR REVIEW**

A. The first and only issue presented for review is the propriety of the Examiner's rejection of the claims 1 and 4-6 under 35 USC 103(a) based on the disclosure of "admitted prior art" in view of the cited reference, Kronstedt, et al, US Patent No. 6,308,082. The rejection is contained in the Office Action mailed January 28, 2004. A copy of the cited references are attached as Exhibits B and C.

#### **VII. GROUPING OF THE CLAIMS**

The claims under consideration are attached as Exhibit A. The claims at issue in this Appeal are arranged in two groups, namely, independent claim 1 and its dependent claims 4 and 5 relating to a method of choosing channel coding and interleaving and claim 6 relating to an arrangement for choosing channel coding and interleaving. The Examiner has not differentiated these groups in the rejection.

#### **VIII. Argument**

A. A central idea in the present invention is that the channel coding and/or interleaving schemes should be considered independently for each new connection and applied only to the connection being set up. The channel coding and/or interleaving scheme are assigned, based on QoS parameters chosen by the mobile terminal, based on expected use, and communicated to the decision-making device.

This is not disclosed in the "admitted prior art" and the teaching of Kronestedt does not remedy this deficiency.

The Examiner characterizes the "admitted prior art" as teaching the following:

"communicating a request message to the decision-making device, said request message indicating a need for setting up a new radio bearer between the terminal and the base station or changing the characteristics of an exiting radio bearer between the terminal and the base station (see page 5, lines 32-34 of the specification of the present application) and indicating a certain set of Quality of Service parameters associated with certain first communication connection (see page 5, lines 32-34 of the specification of the present application)." (emphasis added).

Applicant submits that the excerpt of this application, as set forth in Appendix B, makes no mention of applying a request independently to "a first communication connection". The examiner's characterization, therefore, is not supported by the cited reference.

The reference Kronestedt does not operate on a connection by connection basis. This is explicitly stated at column 5, lines 16-23 of Kronestedt, as follows:

"The fixed-site transceivers and mobile stations of the cell respond to this mode information by implementing a modulation and channel coding scheme corresponding to the selected mode. This modulation and channel coding scheme will be implemented by all mobile stations and fixed-site transceivers of the cell, so that all radio links of the cell will operate in the same modulation and channel coding mode."

The Examiner also states that the "admitted prior art" does not include the step of "mapping said set of Quality of Service parameters to a certain first channel coding and/or interleaving



scheme as a part of the channel coding and/or interleaving scheme allocation made by the decision making device". As indicated above, the "admitted prior art" has further more basic deficiencies, that are not taught by the reference Kronstedt. The Examiner, therefore, has failed to present a prima facie case of obviousness.

Applicant submits that the Examiner has characterized the "admitted prior art" utilising the context of the description of the subject invention. According to basic tenets of patent law, in order to support an obviousness rejection, there must be some suggestion of the desirability of making the modification, aside from the subject application. It is only the description of the subject invention, that indicates a connection-specific allocation of coding and interleaving.

Applicant suggests that it is difficult to avoid an element of hindsight in espousing the Examiner's position. The court has stated the following in such instances:

In short to "imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher. "W. L. Gore & Associates, Inc. v. Garlock, Inc., 220 U.S.P.Q. 303,312 (CAFC 1983).

The difference between the subject invention, as described in independent claims 1 and 6 and the "admitted prior art" is clearly described above. This difference is clearly supported by the language in independent claims 1 and 6, wherein the channel coding and interleaving scheme are applied on a "connection-specific" basis to " a certain first communication

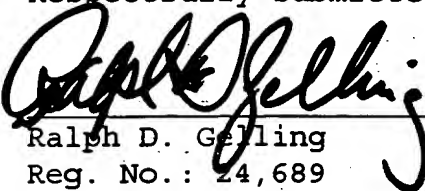
connection". The Examiner's statement in the Advisory Action that the difference is not reflected in the claims is not supported by the claims.

This difference is not rendered obvious by the "admitted prior art" in view of the system of Kronestedt, as indicated by the Examiner. Neither of the references, either alone or in combination, teach the connection specific allocation of this invention.

The above arguments apply equally to dependent claims 4 and 5.

It is respectfully submitted that all of the claims, as presented, are clearly novel and patentable over the prior art of record. Accordingly, the Board of Appeals is respectfully requested to favorably consider the rejected claims and to reverse the final rejections, thereby enabling this application to issue as a U.S. Letters Patent.

Respectfully submitted,

  
Ralph D. Gelling  
Reg. No.: 24,689

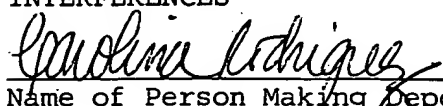
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Perman & Green, LLP  
425 Post Road  
Fairfield, CT 06824

Telephone: (203) 259-1800  
Facsimile: (203) 255-5170

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## IX. APPENDIX OF CLAIMS

1. (Previously Amended) A method for choosing a connection-specific channel coding and/or interleaving scheme to be applied in a communication connection over a radio interface between a terminal and a base station of a cellular packet radio system where a certain decision-making device allocates channel coding and/or interleaving schemes to communication connections, comprising the steps of:

communicating a request message to the decision-making device, said request message indicating a need for setting up a new radio bearer between the terminal and the base station or changing the characteristics of an existing radio bearer between the terminal and the base station and indicating a certain set of Quality of Service parameters associated with a certain first communication connection,

mapping said set of Quality of Service parameters to a certain first channel coding and/or interleaving scheme as a part of the connection-specific channel coding and/or interleaving scheme allocation made by the decision-making device and

communicating said first channel coding and/or interleaving scheme to the base station and the terminal for them to apply said first channel coding and/or interleaving scheme in said first communication connection.

2. (Currently Amended) A method for choosing a connection-specific channel coding and/or interleaving scheme to be applied in a communication connection over a radio interface between a terminal and a base station of a cellular packet radio system where a certain decision-making device allocates channel coding and/or interleaving schemes to communication connections, comprising the steps of:

communicating a request message to the decision-making device, said request message indicating a need for setting up a new radio bearer between the terminal and the base station or changing the characteristics of an existing radio bearer between the terminal and the base station and indicating a certain set of Quality of Service parameters associated with a certain first communication connection,

mapping said set of Quality of Service parameters to a certain first channel coding and/or interleaving scheme as a part of the connection-specific channel coding and/or interleaving scheme allocation made by the decision-making device and

communicating said first channel coding and/or interleaving scheme to the base station and the terminal for them to apply said first channel coding and/or interleaving scheme in said first communication connection;

wherein the step of communicating a request message to the decision-making device further comprises the mutually alternative substeps of:

a1) indicating, within said set of Quality of Service parameters, high service precedence, short mean delay and short maximum delay when the request message concerns a certain communication connection for transmitting real-time speech and/or real-time video image, or

a2) indicating, within said set of Quality of Service parameters, low service precedence, long mean delay and long maximum delay when the request message concerns a certain communication connection for transmitting non-real time data;

and

- the step of mapping said set of Quality of Service parameters to a certain first channel coding and/or interleaving scheme comprises the mutually alternative substeps of

b1) mapping the set of Quality of Service parameters indicating high service precedence, short mean delay and short maximum delay into a channel coding scheme with no retransmissions and a long interleaving length, or

b2) mapping the set of Quality of Service parameters indicating low service precedence, long mean delay and long maximum delay into a channel coding scheme with retransmissions and a short interleaving length.

3. (Original) A method according to claim 2, wherein step b1) further comprises the feature of mapping said set of Quality of

Service parameters indicating high service precedence, short mean delay and short maximum delay into a channel coding scheme which is optimized for speech.

4. (Original) A method according to claim 1, wherein the step of communicating a request message to the decision-making device is executed as a response to an observed need for setting up a new radio bearer between the terminal and the base station.

5. (Original) A method according to claim 1, wherein the step of communicating a request message to the decision-making device is executed as a response to an observed need for changing the characteristics of an existing radio bearer between the terminal and the base station.

6. (Previously Amended) An arrangement for choosing a connection-specific channel coding and/or interleaving scheme to be applied in a communication connection over a radio interface, comprising:

a terminal, a base station and a radio interface between them,

a certain decision-making device for allocating channel coding and/or interleaving schemes to communication connections,

within the terminal and the base station, means for communicating a request message to the decision-making device, in order to indicate a need for setting up a new radio bearer between the terminal and the base station or

changing the characteristics of an existing radio bearer between the terminal and the base station, and means for indicating within said request message a certain set of Quality of Service parameters associated with a certain first communication connection,

within the decision making device, means for mapping said set of Quality of Service parameters to a certain first channel coding and/or interleaving scheme as a part of the connection-specific channel coding and/or interleaving scheme allocation and

means for communicating said first channel coding and/or interleaving scheme to the base station and the terminal for them to apply said first channel coding and/or interleaving scheme in said first communication connection.

## EXHIBIT B

[Excerpt from Page 5, lines 31-36 of Applicant's Specification]

"It is known from prior art that an MS is capable of generating requests for setting up new bearers over the radio interface and in some cases for redefining the characteristics of existing bearers. It is likewise known from prior art that such a request may comprise, within appropriate fields, a selection of QoS parameter values which the MS would like the new or redefined bearer to have."



Exhibit C